

Amendments to the Specification

Please replace the paragraph beginning at page 2, line 14, with the following amended paragraph:

Organic EL devices are characterized in that their luminescent color tint can be controlled to a desired level by selecting an appropriate organic compound to be used as host compound in forming a luminescent layer, and screening a guest compound (or dopant) which may most suit to the host compound. Further, luminescence brightness and life expectancy may be remarkably improved, ~~dependently~~ depending upon the combination of host-and guest-compounds.

Please replace the paragraph beginning at page 2, line 21, with the following amended paragraph:

Organic EL devices have been deemed to be excellent in principle because of the ~~merit~~ fact that they emit a light in an autonomous manner, and this removes the dependency of visual field angle from information displaying equipments, ~~as well as~~ Also, that they require no backlight and this would advantageously save power consumption.

Please replace the paragraph beginning at page 3,
line 6, with the following amended paragraph:

In display panels which are driven in dot matrix mode and required for elevated brightness, any brightness decay would be ~~one of a~~ serious problem. Such decay is most remarkable in green light-emitting devices which usually exhibit the highest brightness in full color panels. This may be due to the fact that there have been available no green dopant materials with a high efficiency and satisfactorily high thermal resistance.

Please replace the paragraph beginning at page 5,
line 4, with the following amended paragraph:

To attain the above objective, an aspect of the present invention ~~described in claim 1 on file is~~ characterized in that in an organic EL device which comprises an anode (20), a hole transportation layer (40), a luminescent layer (50), an electron transportation layer and a cathode (70), the luminescent layer (50) comprises a green light-emitting coumarin derivative as dopant and hole- and electron-transporting substances as host; said coumarin derivative comprising a plurality of coumarin groups bound to an aromatic ring, heterocycle or any combination thereof, and exhibiting

either a glass transition point of 150 °C or higher or a melting point of 297 °C or higher.

Please replace the paragraph beginning at page 5, line 21, with the following amended paragraph:

Further, the durability at elevated temperature in organic EL devices can be enhanced by using such coumarin derivative with an elevated thermal resistance as a dopant in luminescent layer. Still further, durability at elevated temperature can be much more improved by using as host in a luminescent layer the mixture of a material which functions as a hole transportation layer, and another material which functions as an electron transportation layer.

Please replace the paragraph beginning at page 8, line 8, with the following amended paragraph:

Still another aspect of the present invention described in ~~Claim 4 on file~~ is characterized in that an electron transporting substance in the luminescent layer (50) is the same as that in the electron transportation layer (60).

Please replace the paragraph beginning at page 8, line 18, with the following amended paragraph:

Still another aspect of the present invention described in ~~Claim 5 on file~~ is characterized in that a hole transporting substance in the luminescent layer (50) is the

same as that in the hole transportation layer (40), as well as that an electron transporting substance in the luminescent layer (50) is the same as that in the electron transportation layer (60).

Please replace the paragraph beginning at page 8, line 23, with the following amended paragraph:

According to this aspect, one can obtain effects similar to those attained in accordance with ~~the aspects of the present invention described in Claims 3 and 4 on file~~ the hole transporting substance is the same as the hole transportation layer, or the electron transporting substance in the luminescent layer is the same as that in the electron transportation layer.

Please replace the paragraph beginning at page 9, line 1, with the following amended paragraph:

Still another aspect of the present invention ~~described in Claim 6 on file~~ is characterized in that the ratio of a hole transporting substance against host in the luminescent layer (50) is 1 to 10% by mass. Still another aspect of the present invention ~~described in Claim 7 on file~~ is characterized in that the ratio of an electron transporting substance against host in the luminescent layer (50) is 99 to 90% by mass.

Please replace the paragraph beginning at page 9,
line 7, with the following amended paragraph:

The aspects of the present invention described in
~~the Claims 6 and 7 on file~~ wherein the ratio of the hole-
transporting substance to the host in the luminescent layer is
1 to 10% by mass, or that the ratio of the electron
transporting substance to the host in the luminescent layer is
9 to 90% by mass are to specify the ratio of hole- and
electron-transporting substances against host in luminescent
layer. According to these aspects, the balance between holes
with a higher mobility and electrons with a lower mobility in
the luminescent layer (50) is kept in a prescribed level to
enhance both efficiency and durability.

Please replace the paragraph beginning at page 9,
line 13, with the following amended paragraph:

Still another aspect of the present invention
~~described in Claim 8 on file~~ is characterized in that the
glass transition temperatures of hole- and electron-
transporting substances in the luminescent layer (50) are
120°C or higher.

Please replace the paragraph beginning at page 11, line 15, with the following amended paragraph:

The present inventors further concluded that the adhesiveness of the CuPc membrane, particularly, its interfacial adhesiveness to the anode can be enhanced by forming CuPc membrane in such a manner that its crystallinity increases as much as possible.

Please replace the paragraph beginning at page 11, line 19, with the following amended paragraph:

As seen from the aspect of the present invention ~~described in claim 9 on file~~, further studies revealed that in the case of providing between the anode (20) and hole transportation layer (40) the hole injection layer (30) which consists of CuPc, the variation of diffraction peak by heating at an ambient temperature for organic EL device is to fall within $\pm 25\%$ of diffraction peak before heating, in terms of value for diffraction peaks as determined by applying x-ray diffraction method to CuPc.

Please replace the paragraph beginning at page 19, line 2, with the following amended paragraph:

Dependently Depending upon the use of the coumarin derivatives, it is desirable to highly purify them with

distillation, crystallization and/or sublimation when used in organic EL devices, prior to their use.

Please replace the paragraph beginning at page 25, line 6, with the following amended paragraph:

In case that ligand is either 8-quinolinol or benzoquinoline-10-ol, it may bear one or more substituents, and never hinders one or more substituents, for example, halogen groups such as fluoro, chloro, bromo, and iodo groups; aliphatic hydrocarbon groups such as methyl, trifluoromethyl, ethyl, propyl, isopropyl, butyl, isobutyl, sec-butyl, tert-butyl, pentyl, isopentyl, neopentyl, and tert-pentyl groups; ether groups such as methoxy, trifluoromethoxy, ethoxy, propoxy, isopropoxy, butoxy, isobutoxy, sec-butoxy, tert-butoxy, pentyloxy, isopentyloxy, phenoxy, and benzyloxy groups; ester groups such as acetoxy, trifluoroacetoxy, benzoyloxy, methoxyalbonylmethoxycarbonyl, ~~trifluoromethoxyalbonyl~~, ~~ethoxyalbonyl~~, and ~~propoxyalbonyl~~ groups and should be carbonyl suffix; cyano group; nitro group; and sulfone group to be bound to carbon(s) other than those at the C-8 or C-10 positions to which hydroxyl group(s) is linked. In case that a quinolinol metal complex has two or more ligands intramolecularly, they may be the same or different each other.

Please replace the paragraph beginning at page 30, line 5, with the following amended paragraph:

~~Dependently~~ Depending upon the type and ratio against host to be used in combination with coumarin derivative, the organic EL device S1 usually has a luminescent maximum, particularly, a fluorescence maximum in the green region, particularly, around 490 to 540 nm.

Please replace the paragraph beginning at page 32, line 8, with the following amended paragraph:

In case of using the organic EL device S1 in this embodiment in cars and automobiles, it is inevitably exposed to high temperature conditions (for example, around 70 to 80°C). The organic layers, particularly, ~~those with~~ amorphousness~~s~~ that are amorphous undergo crystallization at their glass transition temperatures (Tg) or higher, thus increasing surface irregularity in the layers, and accelerating current leakage. Accordingly, in case of directing to car and automobile uses, the glass transition temperatures (Tg) of all the materials are preferably to be 120°C or higher.

Please replace the paragraph beginning at page 34,
line 12, with the following amended paragraph:

As mentioned above, it is important to impart a property of less changing crystallinity in the hole injection layer 30 under elevated temperature conditions upon formation of devices. Because of this, in FIG. 1, the surface roughness of the anode 20 becomes one of important factors which permit a crystalline material to form a stabilized membrane having a high crystallinity on the anode 20. In other words, a more smooth surface gives a membrane which is more stable and larger in crystallinitymore crystalline.